

WHAT IS CLAIMED IS:

1. A management apparatus for memory capacity, comprising:

a data capacity management means that manages data capacity of mobile terminals that communicate with each other via a network;

a transmission judging means that judges whether data to be transmitted to each of said mobile terminals is transmitted or not, by comparing vacant capacity of each of said mobile terminals, which is managed by said data capacity management means, with the amount of said data to be transmitted to each of said mobile terminals; and

a transmitting means that obtains some data storing in each of said mobile terminals and stores said obtained data and lets each of said mobile terminals make new vacant capacity when said data to be transmitted were judged not to be transmitted, and transmits said data to be transmitted, which were judged not to be transmitted, to each of said mobile terminals by using said new vacant capacity.

2. A management apparatus for memory capacity in accordance with claim 1, wherein:

said data capacity management means renews said vacant capacity of each of said mobile terminals, when each of said mobile terminals requests to obtain some data from said network, and manages said renewed vacant capacity.

3. A management apparatus for memory capacity in accordance with claim 2, wherein:

said data capacity management means renews said vacant capacity of each of said mobile terminals by receiving the information of said vacant capacity from each of said mobile terminals and manages

said renewed vacant capacity.

4. A management system for memory capacity, comprising:
mobile terminals that communicate with each other via a
network; and

a management server having a data memorizing means that
5 stores data from each of said mobile terminals, wherein:

each of said mobile terminals, comprising:

a data obtaining request transmitting means that transmits a
request for obtaining data from said network to said management server,
and

10 said management server, comprising:

a data capacity management means that manages data
capacity of each of said mobile terminals;

a transmission judging means that judges whether said data
requested by each of said mobile terminals is transmitted to each of said
15 mobile terminals or not, by comparing vacant capacity of each of said
mobile terminals, which is managed by said data capacity management
means, with the amount of said data requested by said data obtaining
request transmitting means; and

a transmitting means that obtains some data storing in each of
20 said mobile terminals and stores said obtained data in said data
memorizing means and lets each of said mobile terminals make new
vacant capacity when said data requested by each of said mobile
terminals were judged not to be transmitted, and transmits said data
requested by each of said mobile terminals, which were judged not to be
25 transmitted, to each of said mobile terminals by using said new vacant
capacity.

5. A management system for memory capacity in accordance

with claim 4, wherein:

each of said mobile terminals, further comprising:

5 a data capacity renewing means that transmits the newest vacant capacity of its own mobile terminal to said management server, and makes said vacant capacity managing by said data capacity management means in said management server renew.

6. A management system for memory capacity in accordance with claim 5, wherein:

5 said data capacity renewing means transmits the newest vacant capacity of its own mobile terminal to said management server, and makes said vacant capacity managing by said data capacity management means in said management server renew, when said data obtaining request transmitting means transmits said request for obtaining data from said network to said management server.

7. A management system for memory capacity in accordance with claim 5, wherein:

5 said data capacity renewing means transmits the newest vacant capacity of its own mobile terminal to said management server, and makes said vacant capacity managing by said data capacity management means in said management server renew, at the time of the connection of an external instrument to an interface connector of its own mobile terminal.

8. A management system for memory capacity in accordance with claim 5, wherein:

5 said data capacity renewing means transmits the newest vacant capacity of its own mobile terminal to said management server, and makes said vacant capacity managing by said data capacity

management means in said management server renew, at the time of the location registration of its own mobile terminal.

9. A management method for memory capacity at a management apparatus for memory capacity that manages data capacity of mobile terminals that communicate with each other via a network, in which said data capacity of each of said mobile terminals is managed,
5 comprising the steps of:

judging whether data to be transmitted to each of said mobile terminals is transmitted to each of said mobile terminals or not, by comparing vacant capacity of each of said mobile terminals, which is managed by said management apparatus for memory capacity, with the
10 amount of said data to be transmitted to each of said mobile terminals;

obtaining some data storing in each of said mobile terminals and storing said obtained data in said management apparatus for memory capacity, and letting each of said mobile terminals make new vacant capacity when said data to be transmitted to each of said mobile
15 terminals were judged not to be transmitted; and

transmitting said data to be transmitted, which were judged not to be transmitted, to each of said mobile terminals by using said new vacant capacity.

10. A management method for memory capacity in accordance with claim 9, further comprising the step of:

renewing said vacant capacity of each of said mobile terminals managing by said management apparatus for memory capacity and
5 managing said renewed vacant capacity by said management apparatus for memory capacity when each of said mobile terminals requests to obtain said data to be transmitted to each of said mobile terminals from said network.

11. A management method for memory capacity in accordance with claim 10, wherein:

said vacant capacity of each of said mobile terminals is renewed and managed by said management apparatus for memory capacity by receiving the information of said vacant capacity from each of
5 said mobile terminals.

12. A management method for memory capacity at a management system for memory capacity, which provides mobile terminals that communicate with each other via a network and a management server that manages data capacity of each of said mobile
5 terminals, in which said data capacity of each of said mobile terminals is managed, comprising the steps of:

transmitting a request for obtaining data from said network by each of said mobile terminals to said management server;

judging whether said data requested by each of said mobile
10 terminals is transmitted to each of said mobile terminals or not, by comparing vacant capacity of each of said mobile terminals, which is managed by said management server, with the amount of said data requested by each of said mobile terminals;

obtaining some data storing in each of said mobile terminals
15 and storing said obtained data in said management server, and letting each of said mobile terminals make new vacant capacity when said data requested by each of said mobile terminals were judged not to be transmitted; and

transmitting said data requested by each of said mobile
20 terminals, which were judged not to be transmitted, to each of said mobile terminals by using said new vacant capacity.

13. A management method for memory capacity in accordance with claim 12, further comprising the step of:

renewing said vacant capacity managing by said management server by transmitting the newest vacant capacity of its own mobile terminal to said management server.

14. A management method for memory capacity in accordance with claim 13, wherein:

said vacant capacity of its own mobile terminal is renewed by that the newest vacant capacity of its own mobile terminal is transmitted to said management server, when said request for obtaining said data is transmitted to said management server.

15. A management method for memory capacity in accordance with claim 13, wherein:

said vacant capacity of its own mobile terminal is renewed by that the newest vacant capacity of its own mobile terminal is transmitted to said management server, at the time of the connection of an external instrument to an interface connector of its own mobile terminal.

16. A management method for memory capacity in accordance with claim 13, wherein:

said vacant capacity of its own mobile terminal is renewed by that the newest vacant capacity of its own mobile terminal is transmitted to said management server, at the time of the location registration of its own mobile terminal.

17. A management program for memory capacity at a management apparatus for memory capacity that manages data capacity of mobile terminals that communicate with each other via a network, in

which said data capacity of each of said mobile terminals is managed,
5 comprising:

a judging step that judges whether data to be transmitted to
each of said mobile terminals is transmitted to each of said mobile
terminals or not, by comparing vacant capacity of each of said mobile
terminals, which is managed by said management apparatus for memory
10 capacity, with the amount of said data to be transmitted to each of said
mobile terminals;

an obtaining step that obtains some data storing in each of
said mobile terminals and a storing step that stores said obtained data in
said management apparatus for memory capacity, and a letting step that
15 lets each of said mobile terminals make new vacant capacity when said
data to be transmitted to each of said mobile terminals were judged not
to be transmitted; and

a transmitting step that transmits said data to be transmitted,
which were judged not to be transmitted, to each of said mobile terminals
20 by using said new vacant capacity.

18. A management program for memory capacity in
accordance with claim 17, further comprising:

a renewing step that renews said vacant capacity of each of
said mobile terminals managing by said management apparatus for
5 memory capacity and a managing step that manages said renewed
vacant capacity by said management apparatus for memory capacity
when each of said mobile terminals requests to obtain said data to be
transmitted to each of said mobile terminals from said network.

19. A management program for memory capacity in
accordance with claim 18, wherein:

said vacant capacity of each of said mobile terminals is

renewed and managed by said management apparatus for memory
5 capacity by receiving the information of said vacant capacity from each of
said mobile terminals.

20. A management program for memory capacity at a
management system for memory capacity, which provides mobile
terminals that communicate with each other via a network and a
management server that manages data capacity of each of said mobile
5 terminals, in which said data capacity of each of said mobile terminals is
managed, comprising:

a transmitting step that transmits a request for obtaining data
from said network by each of said mobile terminals to said management
server;

10 a judging step that judges whether said data requested by each
of said mobile terminals is transmitted to each of said mobile terminals
or not, by comparing vacant capacity of each of said mobile terminals,
which is managed by said management server, with the amount of said
data requested by each of said mobile terminals;

15 an obtaining step that obtains some data storing in each of
said mobile terminals and a storing step that stores said obtained data in
said management server, and a letting step that lets each of said mobile
terminals make new vacant capacity when said data requested by each of
said mobile terminals were judged not to be transmitted; and

20 a transmitting step that transmits said data requested by each
of said mobile terminals, which were judged not to be transmitted, to
each of said mobile terminals by using said new vacant capacity.

21. A management program for memory capacity in
accordance with claim 20, further comprising:

a renewing step that renews said vacant capacity managing by

said management server by transmitting the newest vacant capacity of
5 its own mobile terminal to said management server.

22. A management program for memory capacity in
accordance with claim 21, wherein:

said vacant capacity of its own mobile terminal is renewed by
that the newest vacant capacity of its own mobile terminal is transmitted
5 to said management server, when said request for obtaining said data is
transmitted to said management server.

23. A management program for memory capacity in
accordance with claim 21, wherein:

said vacant capacity of its own mobile terminal is renewed by
that the newest vacant capacity of its own mobile terminal is transmitted
5 to said management server, at the time of the connection of an external
instrument to an interface connector of its own mobile terminal.

24. A management program for memory capacity in
accordance with claim 21, wherein:

said vacant capacity of its own mobile terminal is renewed by
that the newest vacant capacity of its own mobile terminal is transmitted
5 to said management server, at the time of the location registration of its
own mobile terminal.

25. A management system for memory capacity, comprising:
mobile terminals that communicate with each other via a
network; and

a management server that transmits data, which each of said
5 mobile terminals requested to obtain from said network, to each of said
mobile terminals, wherein:

each of said mobile terminals, comprising:

a data storing means that stores data obtained from said network, and

10 said management server, comprising:

a data memorizing means that stores data from each of said mobile terminals; and

a judging means that judges whether said data requested by each of said mobile terminals are stored in said data storing means of
15 each of mobile terminals or not by managing vacant capacity of each of said mobile terminals, wherein:

when said judging means judged that said data requested by each of said mobile terminals were not stored in said data storing means, said management server obtains some data in said data storing means of
20 each of said mobile terminals and stores said obtained data in said data memorizing means, and lets said data storing means make new vacant capacity, and said management server transmits said data requested by each of said mobile terminals, which were judged not to be stored, to each of said mobile terminals by using said new vacant capacity.

26. A management system for memory capacity, comprising:
mobile terminals that communicate with each other via a network; and

a management server that transmits data, which each of said
5 mobile terminals requested to obtain from said network, to each of said mobile terminals, wherein:

each of said mobile terminals, comprising:

a data storing means that stores data obtained from said network; and

10 a judging means that judges whether said data requested by each of said mobile terminals are stored in said data storing means or

not by managing vacant capacity of each of said mobile terminals, and
said management server, comprising:

15 a data memorizing means that stores data from each of said
mobile terminals, wherein:

when said judging means judged that said data requested by
each of said mobile terminals were not stored in said data storing means,
said judging means makes said data memorizing means in said
management server obtain some data in said data storing means of each
20 of said mobile terminals, and lets said data storing means make new
vacant capacity, and said judging means makes said management server
transmit said data requested by each of said mobile terminals, which
were judged not to be stored, to each of said mobile terminals by using
said new vacant capacity.

27. A management system for memory capacity in
accordance with claim 25, wherein:

each of said mobile terminals, further comprising:

5 a data capacity renewing means that makes said vacant
capacity of each of said mobile terminals, which is managed by said
management server, renew, by transmitting its own vacant capacity to
said management server.

28. A management system for memory capacity in
accordance with claim 27, wherein:

5 said data capacity renewing means transmits said vacant
capacity of each of said mobile terminals to said management server and
makes said vacant capacity of each of said mobile terminals renew at the
time of the location registration of each of said mobile terminals.